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ABSTRACT:

This report reviews a study to identify individual factors that affect adult learners' success and persistence in college programs. Part 1, a historical analysis, uses past records of students to analyze patterns of persistence and success. It examines how demographic variables relate to continuing enrollment, grade point average (GPA), and degree completion at the University of Missouri at Kansas City (UMKC) and Regis University (RU) over 6 years. Results for RU show female adult learners are 2.3 times more likely than males to graduate within 6 years; having previously attended other colleges, having more transfer credits, and having higher GPAs increases the likelihood of graduation for students in the accelerated programs; older students are more likely to drop out after one term; and students with higher grades are less likely to drop out. Results for UMKC indicate women adult learners and students with no prior college experience are more likely to drop out. Part 2, a current analysis, surveys students to understand factors and experiences contributing to persistence and success. Results indicate no demographic variables are associated with persistence; for adult learners at RU, financial aid, higher grades, and more transfer credit are positively associated with persistence; for UMKC, persistence is positively associated with adult learners who are ethnic minorities, receive financial aid, or have higher grades. Appendixes include 55 references, survey, and 8 tables. (YLB)

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Programs

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Volume 4 • Number 1 • August 2001

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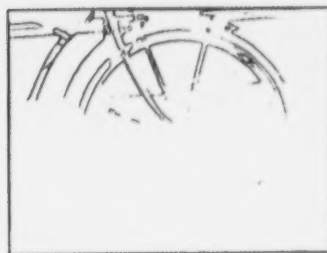


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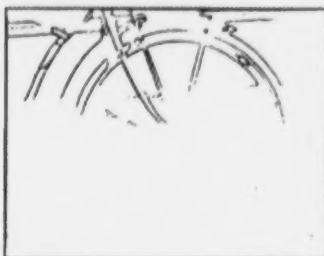
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Executive summary

The National Center for Education Statistics reports that 41 percent of students enrolled in degree-granting higher education institutions in Fall 1998 were adult learners (Digest of Education Statistics 2000, Table 175). These 6 million students (age 25 and older) need a college education to support and develop their careers and to acquire new skills and knowledge in a global society where they are likely to have longer and more productive life spans. Some nontraditional universities such as the University of Phoenix and the American Open University have emerged to serve adults. Also, more than 190 traditional institutions have developed flexible programs with accelerated formats, evening and weekend courses, and distance or on-line options specifically to serve the working adult student.

A prominent feature of nontraditional colleges serving adult students is the availability of intensive, or accelerated, courses that are presented in less time than the traditional course — 20 hours of class time spent during five weeks, rather than 40 hours over 16 weeks. Many adult students appreciate the efficiency and effectiveness of accelerated programs, and projections indicate that approximately 20 percent of all adult college students will be enrolled in accelerated programs

within 10 years. If this projection is accurate, it is likely that the number of institutions catering to this market will increase as well.

Research indicates that the quality of learning and the attitudes of students in accelerated programs are similar or superior to those in traditional programs (Scott and Conrad, 1992, Wlodkowski and Westover, 1999). But little is known about how adults

persist or succeed in accelerated programs or how their progress compares with that of adults in more traditional programs. In general, only 30 percent to 55 percent of the students who enroll in college graduate within five years, but specific rates for adult students, whether in accelerated or traditional programs, are unknown. More research is needed in this area to inform social and academic policy to support and manage the programs in this expanding sector.

In Fall 1999 Regis University and the University of Missouri at Kansas City (UMKC) began a

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accelerated formats.*

two-year collaborative study to identify the factors that influence adult learners' continuing involvement in coursework or graduation (persistence) and grade point average (success).

Regis University is a private Catholic university with an enrollment of 13,500 students located in Denver, Colorado. Its School for Professional Studies has approximately 10,000 adult students enrolled in accelerated programs. UMKC is a public university with an enrollment of 11,000 students that includes a large adult population enrolled primarily in traditional programs.

Three research questions guided this study:

1. Are there characteristics or attributes — such as demographics, prior experience or motivation — that distinguish the adults who remain in college and complete their degrees from those who do not?
2. How do adult students' characteristics and attributes affect their academic success?
3. Is there a significant difference between the characteristics and attributes of adult students who persist and succeed in accelerated programs and those who persist and succeed in traditional programs?

*Adult learners
benefit from
having significant
prior college
experience before
enrolling in four-
year colleges.*

Researchers conducted a historical analysis that tracked enrollment patterns for the Fall 1993 entering cohort at each institution and a current analysis that began documenting the progress of students who entered in Fall 1999. These analyses are described below.

Historical analysis:
Researchers assembled the records for 459 adult

students who entered Regis University and 370 adult students who entered UMKC in Fall 1993 and tracked their progress until Fall 1999. The

records included information about age, gender, ethnicity and transfer credits. These factors were correlated with the dependent variables of first-term dropout, degree completion and grade point average. In addition, we analyzed logistic and multiple regression estimates to determine the relative effects of demographic and other variables on degree attainment, first-term dropout and grade point average.

Current analysis: This study included 321 adult students from Regis University and 253 adult students from UMKC. During the Fall 1999 semester, students at both schools were surveyed using the Adult Learning Survey (see Page 29) to determine their a) demographic characteristics, b) transfer credits, c) personal and classroom motivation, d) stress and responsibilities, e) relationships to faculty and peers and f) financial aid. These independent variables were analyzed in terms of their relationship to the dependent variable of within-year persistence in Spring 2000.

Results: The most important finding of this study is that adult learners benefit from having significant prior college experience before enrolling in four-year colleges. Having more transfer credits was associated with degree completion in the historical analyses at both Regis University and UMKC. As expected, adult learners with higher grades were more likely to persist and succeed at both institutions.

An important demographic difference between the traditional and accelerated-format institutions relates to women adult learners. Women are twice as likely as men to graduate within six years at Regis University, but are two times more likely than men to drop out after one term at UMKC. Among the Fall 1999 cohort at UMKC, women are also less likely than men to persist to the spring semester.

The results from the current analyses also confirm the importance of financial aid to student persistence. At Regis, adult learners who received financial aid were 2.9 times more likely than non-

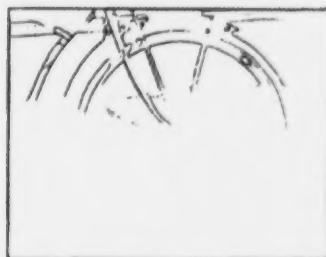
financial aid recipients to persist to the spring semester. This effect was even stronger at UMKC: Adult learners who received financial aid were over four times more likely to persist.

Finally, the motivational variable of social integration was associated with adult student persistence and success in the traditional program only. For the Fall 1999 cohort, adult students in the traditional format who felt integrated with other students were 8 percent more likely to persist than were students who did not feel integrated. In addition, several motivational variables were associated with higher grades at UMKC: self-regulation, self-efficacy, intrinsic goal orientation, faculty interaction, and attitude and meaning. This finding is important because higher grades are strongly related to persistence and degree completion for UMKC adult learners in both cohorts. One explanation for this effect may be that personal confidence is more central to learning in a traditional format due to the length of the course, which makes outcomes and grades more distant.

The findings in this study are important and informative but far from conclusive. They do tell us that previous learning experience at the postsecondary level is beneficial for adults who enter four-year colleges whether they are in accelerated or traditional programs — a finding that is highly consistent with conventional wisdom. We also know that the “typical” student who persists and succeeds in either an accelerated program or a traditional program benefits from financial aid programs and higher grades.

While the motivational variables identified are not significant for the accelerated program, they are associated with student success in traditional programs as measured by grade point average. This finding raises questions about how contextual effects, such as social and instructional variables, interact with personal motivation to influence student persistence and success. Such effects have been documented in the literature about traditional-age students (Pintrich, Smith, Garcia and McKeachie, 1993) and adult students

(Wlodkowski 1999). We are conducting exit interviews of students who have left these programs to give us a deeper understanding of the factors related to adult persistence and success. We hope these interviews point to concrete steps that institutions can take to increase the persistence and success of adult learners.



Introduction

Demand for lifelong learning programs in higher education has increased dramatically in recent years, particularly those tailored for working adults. Adults (individuals 25 years of age and older) now make up 41 percent of

Little research has been conducted to investigate which individual and instructional factors may influence adult learners' persistence and success.

higher education enrollment. A variety of forces propel today's adults to become lifelong learners: the need for career change and development, acquisition of new skills and knowledge in a rapidly changing world, and longer and increasingly productive life spans. Institutions of higher education throughout the world have improved access to education for adults by developing flexible programs that often

include accelerated formats, evening and weekend coursework, and distance education options (Brody, 1998).

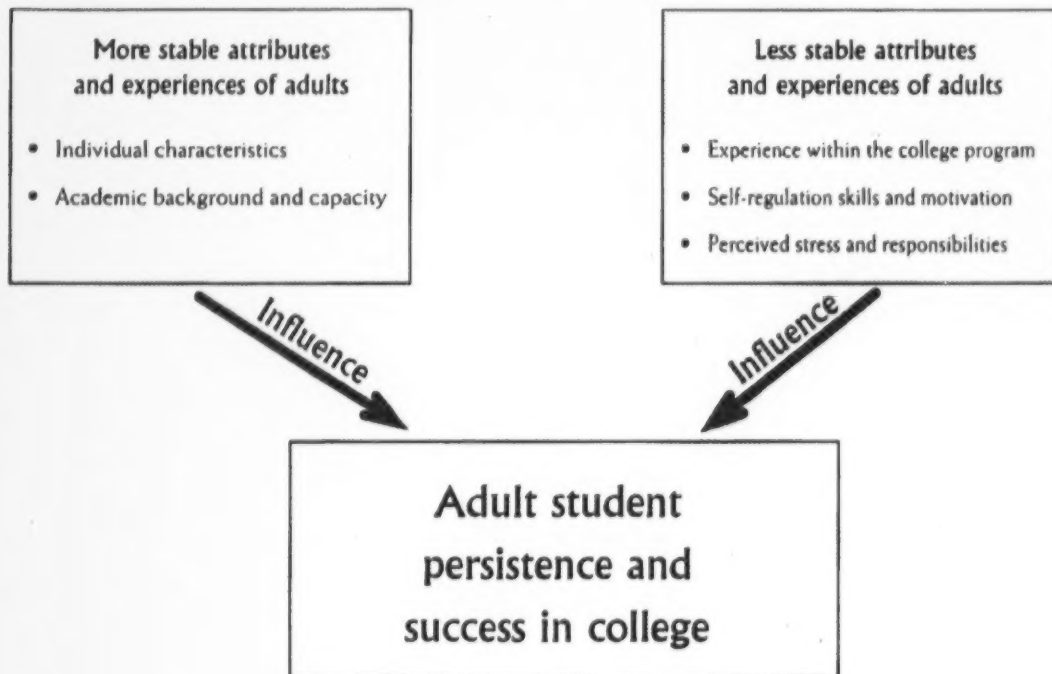
In spite of the dramatic growth of adult participation in accelerated programs (where

courses may last only five weeks and include as few as 20 contact hours), little research has been done on their effectiveness. Little is known, in particular, about how adult learners persist and succeed in accelerated programs or how their progress compares with that of adults in more traditional programs.

Research has been done about the relationship between adult students' demographic characteristics and their entry into higher education (Cross, 1981). For example, researchers find a consistent relationship between socioeconomic status and adult participation rates in college. However, not much is known about how demographic factors influence adult persistence and success in higher education.

In addition, little research has been conducted to investigate which individual and instructional factors may influence adult learners' persistence and success. For example, when comparing adult students with traditional college students (18-22 years old), conventional wisdom frequently cites the adult students' superior "motivation" as a factor in their academic success. However, finding empirical data that actually measures the motivation in adult students (Murray, 1996), let alone the relationship between that motivation and grades or graduation rates, is rare. In general, there is a great deal of research about the persistence and success

Figure 1: Attributes and experiences influencing adult student persistence and success in college



of traditional-age students, but few studies focus on adult students.

There is a body of research to demonstrate that the learning and attitudes of adult students in accelerated program formats are similar to, and sometimes superior to, those of students in traditional programs (Scott and Conrad, 1992; Wlodkowski and Westover, 1999). Yet the underlying factors that contribute to that success are largely uninvestigated.

Differentiating adults' attributes and experience in terms of *stability* may be helpful (see Figure 1). Stability refers to the degree to which a factor is fixed (stable) or variable (unstable) across situations and over time. Such a lens tells us more about what might be changed in order to support adults in their pursuit of a college education. From this viewpoint, the (a) individual characteristics and (b) academic background and capacity are most stable, that is, least likely to be influenced by

external factors. On the other hand, (c) self-regulation skills and motivation, (d) experience within college programs, and (e) perceived stress and responsibilities are less stable, that is, more likely to be responsive to college programs, policies and instruction as they affect adult persistence and success in college programs.

Research questions

This report reviews an extensive study to identify the individual factors that affect adult learners' success and persistence in college programs. Persistence is defined as continuing involvement in coursework or graduation, and success is defined in terms of grade point average. There are two parts to this study. Part 1 is a historical analysis (using past records of students to analyze patterns of persistence and success), and

Part 2 is a current analysis (surveying current students to understand factors and experiences contributing to their persistence and success).

In Part 1, the questions that frame the historical analysis are:

- Can adult students be differentiated in terms of their likelihood to persist in college on the basis of their (a) demographic characteristics and (b) academic background and capacity?
- How do adult students' demographic characteristics and academic background and capacity relate to their levels of academic success and achievement?
- What are the demographic characteristics and academic background and capacity of adult students who persist and succeed in traditional programs and those who persist and succeed in accelerated programs?

In Part 2, the questions that frame the current analysis are:

- Can adult students be differentiated in terms of their likelihood to persist in college on the basis of their (a) demographic characteristics, (b) academic background and capacity, (c) self-regulation skills and motivation, (d) experience within the college programs and (e) perceived stress and responsibilities? In other words, can we develop a profile of persisting vs. non-persisting students based on these characteristics?
- How do adult students' individual characteristics and experiences (as summarized in items a through e above) influence their academic success and achievement?
- What are the profiles of the adult students

(as summarized in items a through e above) who persist and succeed in accelerated programs and those who persist and succeed in traditional programs?

In the sections that follow, we review existing literature about five variables said to have a significant influence on adult persistence and success in college. These are: (1) individual characteristics, (2) academic background and capacity, (3) self-regulation skills and motivation, (4) experience within college programs and (5) perceived stress and responsibilities. These factors have been studied with regard to traditional-age students, not as they relate to the adult student. We then present the research and findings for the historical analysis and current analysis we have conducted. Drawing on both of these studies and existing literature, we end the report with our conclusions and suggestions for further research.

Previous research

Relatively few studies have directly investigated the persistence and success of adult students. The studies that do exist often center on "participation" — adults' entry into higher education; how these adult students perform has been the focus of limited study, most of it within the past 20 years. Rather than investigating adult students in only a traditional college setting, the research reviewed in this report explores the persistence and success of adult learners in both a traditional program (University of Missouri at Kansas City) and an accelerated one (Regis University).

Adult learners' demographic characteristics

Are existing demographic findings and conceptual models for traditional-age college student persistence and success applicable to older students? The literature suggests that low-income and underrepresented racial and ethnic students are "at risk" in traditional college settings (Astin,

1993; Allen, 1992; American Council on Education, 1993). African-American, Hispanic and Native American college participation rates and degree attainment are disproportionately lower than those of European-American students (Wilds, 2000). African-Americans and Hispanics continue to significantly trail European-Americans in the percentage of young adults with a bachelor's degree or higher. The National Center for Education Statistics reports that 35 percent of European-Americans ages 25 to 29 had a bachelor's degree in 1997, compared with 16 percent of African-Americans and 18 percent of Hispanics (Condition of Education 2000).

Adult students are more likely to be married, and they tend to resemble the "at risk" population of traditional students. They are more likely to come from families of lower socioeconomic status and lower parental educational attainment than do traditional-age students (Bean and Metzner, 1985). However, in the limited research that does exist, Tweedell (2000) found that adult African-American and Hispanic students persisted as well as adult European American students in an accelerated program. In addition, in a national study of college achievement, Osterlind (1997) found higher achievement in English among students 25 years and older when compared with students between 18 and 24 years of age. The difference was even more pronounced for collegians over the age of 35, who scored highest of all. Each older category achieved progressively more gains. Thus, there is initial evidence that lower income and ethnic/racial marginalization may not be associated with lower persistence and success for older college students.

In addition, there is little research about gender differences. Since Cross published her research on adult students in 1989, the proportion of women participating in adult education has increased. Recent analyses suggest that women and men often differ in their goals and motivation for pursuing higher education (Steward, Gimenez, & Jackson, 1995). The demographic profile of adult students described above suggests a need for research that considers adult students' motivation and investigates their persistence and academic

success in terms of age, gender and socioeconomic status. Currently, this research does not exist (Jackson, 1998).

Academic background and capacity

It is logical to assume that students who begin their program of study with superior communication skills, academic preparation and capacity for learning will perform better and be more likely to complete their studies than those with limited

skills, experience and capacity. Numerous studies using various measurements and methods have yielded strikingly similar results: Initial college grade point average (GPA) can be predicted with modest accuracy from admissions information (Astin, 1993). The two most powerful predictors are the student's high school GPA and scores on the college admissions tests — with grades carrying more weight than standardized test results. Yet most accelerated college

programs for adults require very little beyond a high school diploma, work experience (about three years on average), and a writing test. As a result, high school grades and standardized scores are often unavailable.

Conventional wisdom among advisers for accelerated programs is that those adults who have had significant prior college experience (about 30 semester hours, usually at the community college level) and who exhibit competent writing skills will be more likely to succeed than those students who do not (C. Wolfe, personal communication, November 2000). Since writing skills do positively correlate with college GPA (Astin, 1993), there is

Lower income and ethnic/racial marginalization may not be associated with lower persistence and success for older college students.

some indirect evidence to support the logic of the advisers. In addition to demonstrating success with college-level work, prior college experience may provide some degree of confidence, strategy and familiarity with accelerated college learning, contributing to successful persistence and degree attainment.

Self-regulation skills and motivation

Studies indicate that personal motivation and self-regulation skills can mediate the individual differences in capacity and background that students bring to a college program (Pintrich, Smith, Garcia and McKeachie, 1993). These attributes also have been shown to be significant in

There has been no systematic research on self-motivation and self-regulation for adult learners.

supporting successful achievement among diverse college students (Garcia, 1993; Sedlacek and Webster, 1978). Self-regulation skills involve three general aspects of academic learning: First, self-regulation of behavior involves the active control of the resources students have available — time,

study environment and the help of peers and faculty. Second, self-regulation of motivation and affect involves controlling and changing motivational beliefs such as efficacy and goal orientation, so emotions and anxiety are controlled in ways that improve learning. Third and finally, self-regulation of cognition involves controlling various cognitive strategies for learning, such as estimating the steps necessary to learn a new skill.

In the few instances where research has been conducted to investigate how adults can learn to use self-regulation skills, the results have been positive (Trawick and Corno, 1995). In addition, students often learn self-regulation skills by watching others as well as through trial and error (Pintrich, 1995). It is quite possible that many

adult learners possess effective self-regulation skills as a result of maturity and/or work experience. Teachers who have taught both traditional-age students (18-22 years old) and adult students (25 years and older) frequently report that the adult students are more motivated (Wlodkowski and Westover, 1999). In fact, a long-standing assumption in adult learning theory is that adults are more self-directed and self-motivated than are younger students (Knowles, 1980). However, there has been no systematic research on self-motivation and self-regulation for adult learners.

Experience within college programs

Although experience and involvement within college programs is less an internal characteristic than it is an evolving perception, it is so widely documented as a major force shaping student persistence that it must be included in any study that purports to investigate this phenomenon. The more academically and socially involved students are — that is, the more they interact and feel connected with other students and faculty — the more likely they are to persist (New England Adult Research Network, 1999; Tinto, 1998). Also, the more they view themselves as valued members who are integrated into the institution, the more likely they are to persist in their studies (Rendon, 1994). Naretto (1995) refers to these variables as the "internal community" that is part of college life: faculty, staff and students. Supportive involvement with them is crucial to the persistence of both traditional-age and older college students.

At school, Tinto believes *academic integration* may be the more important form of involvement (Tinto, 1998). This dynamic was most evident when researchers compared the experiences of students in a small, residential four-year college with those of students attending an urban two-year college. For students at the two-year institution, the classrooms and the laboratories are the primary places to meet peers and interact with the faculty. For them, academic involvement is a more

dominant mode of interaction with fellow students and faculty than is true in residential settings, where social involvement is more likely to take place. In this respect, most accelerated adult education programs are more likely to mirror the academic and social experience of students at the two-year college. Because of work and family responsibilities, the adults are less likely to spend time on campus other than to attend classes and use the library. Most of their time is spent in academic pursuits. As a result, their perception of academic integration may be more important to their persistence than is social integration.

In addition, because most accelerated college programs for adults are organized into large blocks of learning time (weekend classes and four-hour periods are commonplace), there is far more use of active and collaborative learning processes than may be true in more traditional programs (Scott and Conrad, 1992). These shared and collaborative learning experiences create connection among students and are likely to validate their perceptions (Wlodkowski and Ginsberg, 1995) and increase their feelings of academic and social involvement. Such connected learning is more likely to contribute to their persistence. The extent to which this phenomenon occurs should be investigated as part of a comprehensive study of factors contributing to adult learners' persistence and success in accelerated college programs.

Perceived stress and responsibilities

Most examinations of adult learner participation and persistence note the significance of contextual factors such as family, work and other life responsibilities that adult learners bring to their educational experience (Cross, 1981; Deshler, 1996; Kerka, 1995). Adult "burnout" and stress are well-documented phenomena (Schaie and Willis, 1996). Working full-time, having children, and (for women) being married when entering college all have been correlated with attrition (Astin, 1975). However, in recent years, many programs have

emerged that attempt to alleviate conflict between responsibilities at home, work and school. These "adult friendly" programs feature flexible scheduling, independent or distance-learning options, low residency requirements and accelerated formats to invite and sustain adult participation in college. These programs may more closely align with the tendency identified by Hanniford and Sagaria (1994): that once working adults have made the commitment to return to college, they have the motivation to make the adjustments required for success.



Part 1

Adult learner persistence and success in accelerated and conventional college settings: A historical analysis

The overarching research issue for this study was to identify the individual factors associated with adult learners' success and persistence in accelerated and conventional college programs. A historical analysis provides a view of persistence and success that has the benefits of a longitudinal study that permits observations over an extended period. We can see how demographic variables relate to the continuing enrollment, grade point average and degree completion at the University of Missouri at Kansas City (UMKC) and Regis University over a period of six years. This study also allows us to understand and compare how adult students perform in two different learning formats, conventional (traditional) and accelerated.

Study design

Two cohorts of adult undergraduate degree-seeking students (459 students from Regis University and 370 students from UMKC, were tracked from Fall 1993 until Fall 1999. In this study

all students enrolled at Regis University are in accelerated courses (5 weeks, 20 contact hours) and all students enrolled at UMKC are in traditional courses (16 weeks, 40 contact hours). For both universities, analysts examined the relationship between students' demographic characteristics and academic background and capacity and their persistence and success. The specific research questions were:

- What are the demographic characteristics of adult students who persist and succeed in traditional programs at UMKC and those who persist and succeed in accelerated programs at Regis University?
- What is the academic background and capacity of adult students who persist and succeed in traditional programs at UMKC and those who persist and succeed in accelerated programs at Regis University?

Independent variables included demographics (gender, age and ethnicity) and background/capacity variables (type of prior institution,

number of prior institutions and transfer credits). These data were analyzed, compared and correlated with dependent variables: first-term dropout, degree completion and grade point average (GPA). In the analysis, GPA was used both as an independent variable reflecting capacity and as a dependent outcome variable. GPA reflects capacity because it correlates with degree completion (Astin, 1993) and because a student's decision to remain in college would naturally be directly influenced by his or her academic performance. GPA is a dependent outcome variable because, as an indicator of academic achievement, it relates to a student's academic skills such as reading and writing. These skills may have been limited or expanded by the opportunities socially bound to race, gender and class in American society. (See Table 1 in the appendix for sample demographics.)

Samples

Descriptive statistics for the Regis and UMKC populations are presented below. Inferential statistics are used to determine whether the differences observed are statistically significant.

Institutional differences

Context is a very important consideration when comparing student populations. An important difference between Regis and UMKC is that Regis (enrollment 13,500) is a private Catholic university while UMKC (enrollment 11,000) is a public institution. One of the fastest-growing components of faith-based colleges is their adult education programs (Mission Formation and Diversity Project, 1999). Approximately two-thirds of these institutions have created one or more bachelor's degree programs for adult students. Of these, 60 percent have started in the past 10 years.

There also are significant regional differences between the two schools. Regis is located in the

West, in Denver; UMKC is located in Kansas City, Missouri, a Midwestern region. In the past five years, the Denver area has added an average of 40,000 new residents annually. This increase is largely fueled by the rapidly growing technology industry in the area. The population in Kansas City has generally remained stable during the last five years.

Population comparisons

Adult student population comparisons for the past seven years show that Regis has a larger proportion of females, 60.6 percent, compared with 53.2 percent at UMKC. Also, the adult students at UMKC are younger than the adult students at Regis (see Figure 2).

Not only are the students at Regis an average of nearly four years older, 53 percent of them are between the ages of 35 and 49. Only 26 percent of the students at UMKC are in this age range. Due to this difference, students at Regis likely have considerably more work experience.

The ethnic mix at the two schools differs as well (see Figure 3 on the next page).

Figure 2: Population comparisons

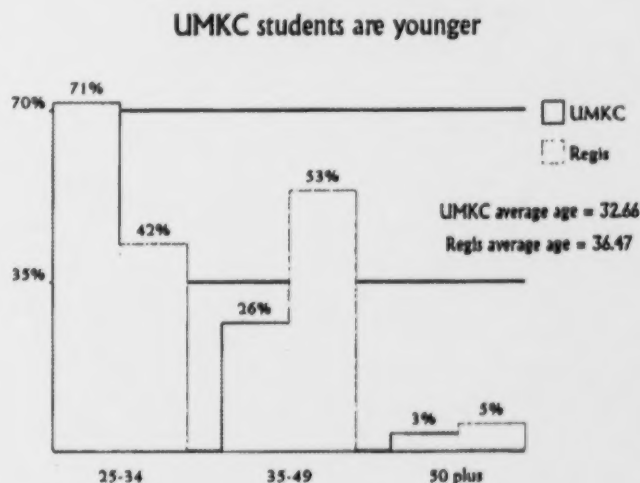
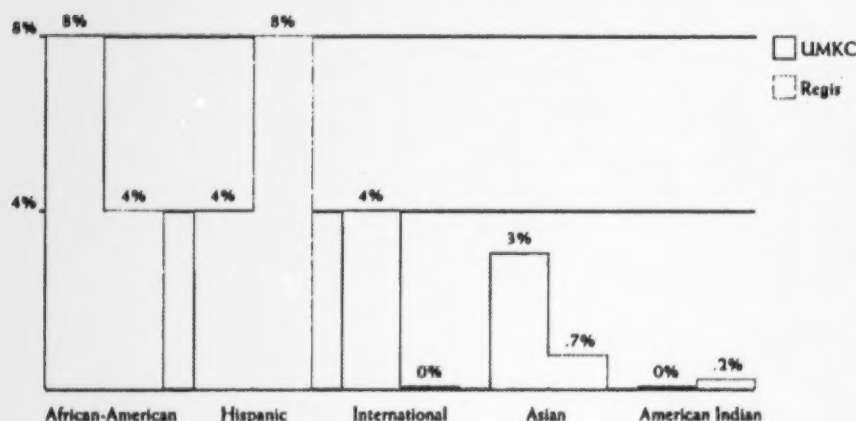


Figure 3: Population comparisons

Ethnic mix differs — Approximately 70% of the students at both institutions are white. The distribution of other groups is displayed below.



Approximately 70 percent of the students at both institutions are white. However, while 8 percent of the students at UMKC are African-American and 4 percent are Hispanic, the exact reverse is true at Regis.

The amount of transfer credits accepted toward a degree also differs between the two institutions. Regis tends to accept more transfer credits than does UMKC. At UMKC, 37 percent of the students who enroll have no credits. At Regis, this proportion is only 4 percent. On the other hand, only about 40 percent of the UMKC students have between 31 and 99 transfer credits; about 68 percent of the Regis students have this much.

The amount of prior credit is important for two reasons. First, it determines how close a student is to graduating when he or she enters the institution. If a student is close to reaching a degree, she may be more likely to complete. Second, the amount of credit indicates some level of prior success with college-level work. In the absence of prior grade point average and standardized tests, we can only approximate prior success.

Finally, the students at the two institutions differ in the types of institutions they attended before enrolling at the universities (see Figure 4).

At UMKC, 13 percent of the students have no prior college experience, while only 2 percent of the students at Regis fall into this category. Also, 55 percent of the students at Regis have attended both a two-year and a four-year college compared with only 37 percent of the students at UMKC. These differences indicate that Regis students may be more familiar with the college environment and may be more comfort-

able learning in a college setting.

The final difference between the two institutions is in their admissions requirements. Regis has an open-enrollment system requiring the equivalent of a high school diploma and three years' work experience. UMKC is more selective, requiring either a minimum ACT score of 24 or a minimum SAT score of 1100 (combined verbal and math) or a minimum high school rank in the 47th percentile. These differences in admissions standards probably lead to differences in the background and capacity of the student populations.

Analysis

In general, a higher percentage of students graduate from Regis — and graduate sooner — than students from UMKC. After three years, 26 percent of students had graduated from Regis, while 18 percent had graduated from UMKC. Since Regis is an accelerated program, this outcome is expected.

After six years, the difference in graduation figures had decreased and was no longer significant. By Fall 1999 about 37 percent of the students

had graduated from Regis, while 32 percent had graduated from UMKC. Nationally, the six-year graduation rate is 38 percent for large urban state colleges and universities (American Association of State Colleges and Universities, 1995). In addition, at both schools, 4 percent of the students originally enrolled in Fall 1993 were still enrolled in Fall 1999. Thus, about 60 percent of the students at Regis and 64 percent at UMKC had dropped out without getting a degree. Degree completion is summarized below:

Institution	Graduated in 3 Years	Graduated in 6 Years	Enrolled Fall 1999		Number of Students
Regis	25.70%	37.47%	3.70%	59.82%	459
UMKC	17.57%	32.16%	4.04%	63.78%	370

Although the proportion of students who ultimately drop out of both institutions is not significantly different, students at UMKC tend to make the decision to drop out somewhat earlier. About 12 percent of the Regis students dropped out at the end of the first term and did not return for the duration of the study, compared with 23 percent of UMKC students. At the end of one academic year, the permanent dropout rates increased to 16 percent and 25 percent, respectively. While these attrition rates are better than the 32 percent rate reported by the American Association of State Colleges and Universities (1995) or the 45.7 percent reported by the American College Testing Service for open-enrollment institutions (Feemster, 1999), intervention to increase retention during this early critical phase would likely have improved graduation rates at both institutions.

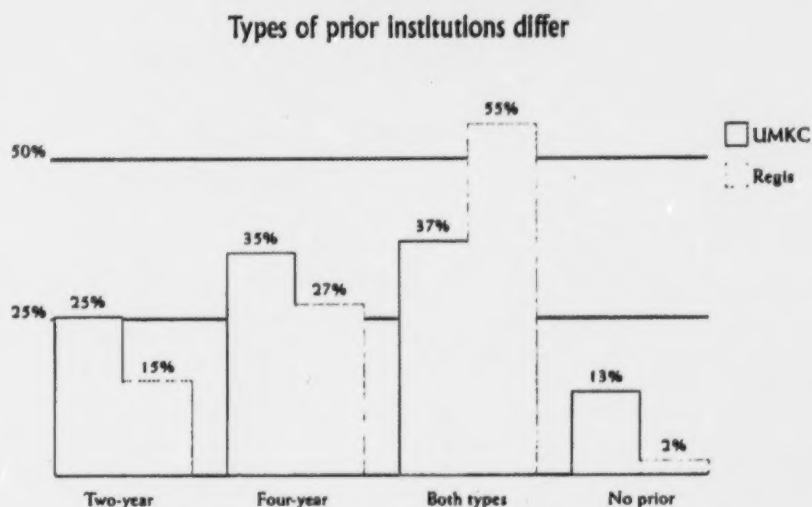
The grade point average (3.46) for students at Regis is

higher than the GPA (2.99) for students graduating from UMKC. While the GPA for 36 percent of students from UMKC is between 3.5 and 4.0, the average is between 3.5 and 4.0 for 67 percent of the students from Regis. The grade point difference between these two schools is statistically significant ($p < .001$).

Correlation of independent and outcome variables

As might be expected, examination of student records from Fall 1993 to Fall 1999 pointed to correlations between certain demographic characteristics and various outcome variables. Determining the extent or nature of these relationships when accounting for the interrela-

Figure 4: Population comparisons



tionships between variables is important because history suggests that many of these variables capture similar influences. For example, the influence of such characteristics as attending a two-year or four-year institution before enrolling at Regis or UMKC is likely reflected in transfer credits. Consequently, we used Pearson correlations to examine the relationship between outcome variables and demographic characteristics and background/capacity variables. The results are summarized in Table 2 in the appendix.

Regression on outcome variables

Based on the correlation results, logistic regression was performed on degree completion and first-term dropout for each institution (see Table 5 in the appendix). The independent variables included the number of transfer credits, the type of prior institution (two-year only, vocational), number of prior institutions, final grade point average, gender, ethnicity and age. The dependent variable degree completion is coded as a dichotomous variable and defined as graduating within six years from the institution where originally enrolled in 1993. The outcome variable first-term dropout is coded as a dichotomous variable and defined as not enrolling for the second term at the same institution and not returning for the duration of the study.

The results for Regis show that female adult learners are 2.3 times more likely than men to graduate within six years. The number of institutions previously attended, the amount of transfer credits, and higher grade point averages also increased the likelihood of graduation for students in the accelerated program at Regis. Adult learners in the traditional program at UMKC who attended two-year institutions previously were almost twice as likely to graduate within six years.

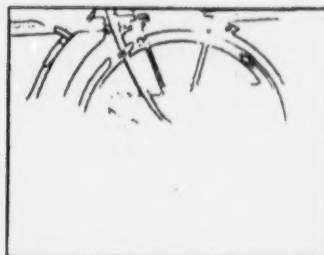
The next set of logistic regressions examined first-term dropout. Using the same set of independent variables, we found that older students at Regis were more likely to drop out after

one term, and that students with higher grades were less likely to drop out. At UMKC, women adult learners and students with no prior college experience were more likely to drop out after one term.

To determine the degree to which the models previously developed for degree completion worked when controlling for first-term dropout, we ran regressions for degree completion for each institution, adding first-term dropout to the independent variable list. The results did not change for the Regis cohort. In contrast, when we added first-term dropout to the UMKC model, grade point average and previous two-year institutional experience lost significance. Although the number of transfer credits remained significant, its explanatory value was negligible.

These results suggest that the factors influencing degree completion at UMKC occur in the first term and affect early attrition. On the other hand, at Regis, the factors that influence graduation rates held even after controlling for first-term dropout, suggesting that these factors are present throughout the academic experience. This difference is consistent with the attrition patterns at the two institutions. First-term attrition at UMKC is almost double the rate at Regis — 23 percent compared with 12 percent — but graduation rates and long-term persistence are about the same after six years. Thus, Regis eventually loses about the same proportion of students as UMKC, it just happens over a longer period of time.

The last set of analyses used least-squares multiple regression to examine the effects of these characteristics on grade point averages (see Table 7 in the appendix). The outcome variable in this analysis is the final cumulative GPA for the last term the student was enrolled at the institution. Neither model explained much of the variation in grade point averages (6 percent for Regis and 8 percent for UMKC); however, the results do indicate that ethnicity (being a minority student) negatively affects GPA. This finding is important because higher grades positively influence degree completion.



Part 2

Adult learner persistence and success in accelerated and conventional college settings: A current analysis

In order to provide a current and more comprehensive identification of factors that relate to adult learners' persistence and success in accelerated and conventional college programs, a survey was mailed to adult students who enrolled for the first time at both schools during the Fall 1999 semester. The total number of students was 980 — 538 from Regis and 442 from UMKC.

Study design

The Adult Learning Survey (Wlodkowski, Mauldin and Gahn, 1999) was used to determine the (a) demographic characteristics, (b) academic background and capacity, (c) self-regulation skills, motivation and perceived motivational conditions, (d) perceived stress and responsibilities, (e) internal community support and (f) financial aid and tuition reimbursement resources for students enrolled at both institutions Fall 1999. (Please see Pages 28-32 for more details and a copy of the survey.) Three hundred twenty-eight (61.0 percent) students from Regis returned surveys, and

260 (58.8 percent) from UMKC returned them. Because of completion errors, seven surveys from each school were discarded, resulting in sample sizes of 321 for Regis and 253 for UMKC.

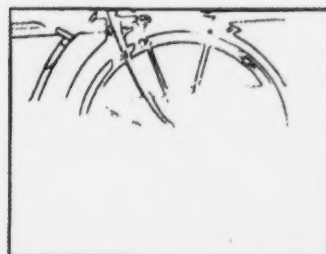
The survey provided data to address several research questions:

- What are the demographic characteristics of adult students who persist and succeed in traditional programs at UMKC and those who persist and succeed in accelerated programs at Regis University?
- What is the academic background and capacity of adult students who persist and succeed in traditional programs at UMKC and those who persist and succeed in accelerated programs at Regis University?
- What are the motivational characteristics of adult students who persist and succeed in traditional programs at UMKC and those who persist and succeed in accelerated programs at Regis University?
- What are the influences of tuition aid for adult students who persist and succeed in

traditional programs at UMKC and those who persist and succeed in accelerated programs at Regis University?

The independent variables used in the analysis can be grouped into four categories. The first set, "demographic variables," included gender, ethnicity, age, marital status, household income, children in the home, single-parent status and parent's education. The second set, "background/capacity variables," included the number of transfer credits, grade point average and employment status. (Because type and number of prior institutions could be largely accounted for by the amount of transfer credits, these two variables were not included in the current analysis.) The third set, "tuition aid variables," included information about financial aid, scholarships, veterans' benefits and/or employer tuition reimbursement. The fourth set, "motivation variables," stemmed from responses to the Adult Learning Survey and included measures of self-regulation skills, personal motivation, perceived motivational conditions, perceived stress and internal community support. These independent variables were analyzed in terms of their relationship to the dependent variable: within-year persistence to the Spring 2000 semester.

With the addition of this current study to the historical analysis, we can map our understanding of how adults participate in and respond to traditional and accelerated formats. We can see how both external and internal factors influence adult students' success and persistence in college in general and in each of these formats in particular. This work contributes to policy and theory development by focusing on adult student progress beyond the initial decision to enroll.



Findings

Population comparisons

The two schools showed no significant difference in terms of students' gender and age. The average age for the entering cohort at Regis is 34.2 years; for UMKC it is 34.6 years. Also, both Regis and UMKC have more students who are women, 63.6 percent and 61.7 percent, respectively. The average age and proportion of women remain roughly consistent from Fall 1999 to Fall 2000, suggesting that persistence is not related to age or gender at these institutions. (Please refer to Table 3 in the appendix for comparisons of these and other demographic characteristics.)

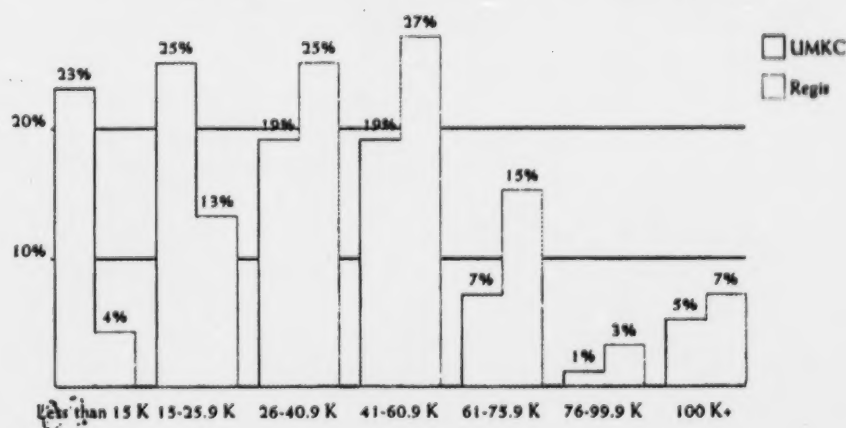
In general, students at Regis have proportionately higher annual household incomes than do students at UMKC. Approximately 48.0 percent of UMKC students have incomes less than \$26,000 compared with 17.0

percent at Regis. Figure 5 below provides additional detail about this distribution.

The ethnic mix also differs at the two schools. Approximately 66 percent of the students at both institutions are white; Asian and Pacific Islander students make up 3 percent of the population at Regis and 5 percent at UMKC. However, the proportions of African-American and Hispanic students at the two schools are nearly reversed. African-Americans make up 9 percent of the

Figure 5: Population comparisons

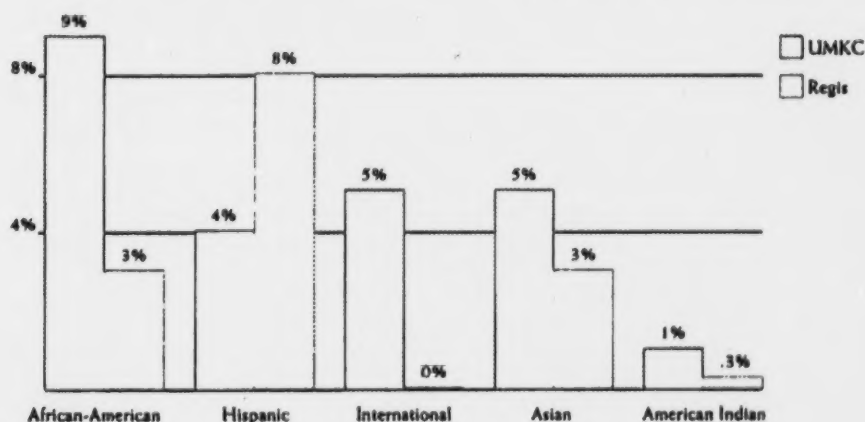
Incomes differ — 48% of UMKC students have family incomes of less than \$26,000 compared to 17% of Regis students



population at UMKC compared with 3 percent at Regis. Hispanic students represent 4 percent of the population at UMKC and 8 percent at Regis. These proportions are relatively consistent from Fall 1999 to Fall 2000, suggesting that ethnicity is not a major factor in retention. However, caution should be used in interpreting results because nearly 20 percent of the students who returned surveys from Regis and 10 percent of those at UMKC did not identify an ethnic category. Consequently, we excluded ethnicity in the logistic regression due to the limited reliability of this variable. A graphic presentation of the ethnic distribution is provided below.

Figure 6: Population comparisons

Ethnic mix differs — Approximately 70% of the students at both institutions are white. The distribution of other groups is displayed below.



Another difference in the two populations is that Regis students are more likely to be married. Approximately 59.6 percent of the students at Regis are married, compared with 49.8 percent at UMKC. Again, the proportion of married students is about the same in Fall 2000, suggesting that marital status is not a factor in persistence.

Although Regis students are more likely to be married, the two populations do not differ widely in terms of having children in the home or in the proportion of single parents. About 48.0 percent of

the Regis students have children, compared to 41.0 percent of UMKC students. Also, about 11.4 percent of the Regis students are single parents compared with 12.3 percent at UMKC. As with marital status, these proportions are consistent into Fall 2000. Another difference between the institutions is the amount of transfer credit. Although about 76.0 percent of the Regis students have some transfer credit compared to 66.0 percent at UMKC, 18.6 percent of the students at UMKC show more than 100 hours of credit. As a result, the average number of transfer credits at Regis is 34.1 compared to 54.7 at UMKC. We believe that this difference is largely due to record-

keeping practices: UMKC records all prior credits, but Regis records only credits that are counted toward a degree. While this difference may skew the absolute figures, the data are probably adequate indicators of prior experience at both schools.

The institutions also differ in the amount and type of tuition aid students receive. Students at Regis are more likely to have employer reimbursement, while

students at UMKC are more likely to have financial aid or scholarships. Approximately 29.3 percent of students at Regis receive financial aid, and 2.3 percent have scholarships. At UMKC, 47.4 percent receive aid, and 17.2 percent have scholarships. On the other hand, 48.6 percent of the Regis students receive employer reimbursement compared with 26.5 percent at UMKC.

To a large extent, financial aid is a significant factor in retention. At both institutions, students receiving financial aid were significantly more

likely to enroll in Spring 2000; at UMKC, students with employer reimbursement were less likely to enroll the following year (Fall 2000).

Analysis of outcome variables

Persistence rates at the two institutions were roughly equivalent. About 29.0 percent of the Fall 1999 cohort at Regis and 24.0 percent at UMKC did not enroll in Spring 2000. Although a few of the students who did not enroll in the spring returned, about 40.0 percent of both cohorts did not enroll in Fall 2000. This attrition rate is comparable to statistics published by the American College Testing Service (Feemster, 1999) that showed a first-year attrition rate of 45.7 percent at open-enrollment institutions where composite Scholastic Aptitude Test scores range from 830 to 950.

At the end of one year, the grade point average for students still enrolled at Regis is significantly higher than the average for students at UMKC — 3.58 versus 3.23. Grade distributions show that relatively few students at Regis have averages below 3.5; in fact, 70.9 percent of them have averages between 3.5 and 4.0, compared with 41.0 percent at UMKC.

As mentioned earlier, admissions requirements differ for the two institutions (see Page 12), which may explain the differences in background and capacity described above.

Correlations of outcome variables

To better understand enrollment behavior and achievement at the two institutions, we used Pearson correlations to examine the relationship between the independent variables, enrollment in the Spring 2000 and Fall 2000 semesters, and cumulative grade point averages. The results are summarized in Table 8 in the appendix.

One of the more striking results from the correlation analysis is that virtually no demo-

graphic variables are associated with persistence in either semester following Fall 1999 for both cohorts. The one exception (minority ethnic status for UMKC in Spring 2000) does not maintain statistical significance in the logistic regression analysis.

For the adult learners at Regis, receiving financial aid, having higher grades, and having more transfer credit are positively associated with persistence in both the Spring 2000 and Fall 2000 semesters. If the father of the adult student at Regis has at least a bachelor's degree, this background characteristic is positively associated with persistence in the Fall 2000 semester only. Being employed full-time, on the other hand, is negatively associated with persistence.

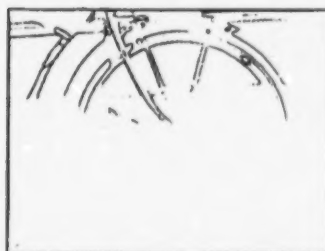
For the UMKC cohort, the relationship between the independent and dependent variables is different between the Spring 2000 and Fall 2000 semesters. This difference is not surprising given the results from Part 1 that showed the early attrition dynamics of adult learners at UMKC. Adult learners who are ethnic minorities, who received financial aid, or who had higher grades were positively associated with persistence in the Spring 2000. These variables were not significantly related to persistence in Fall 2000; rather, students who were employed full-time and those who received employer reimbursement were negatively associated with persistence for this term. Interestingly, adult learners with incomes greater than \$60,000 were negatively associated with persistence in both the Spring 2000 and Fall 2000 semesters.

The relationship between the motivational variables from the ALS and persistence were mixed at both institutions. For the Regis cohort, only one variable was related to persistence in Spring 2000: faculty integration. The existence of this attribute among adult learners in the accelerated program was positively associated with persistence. This variable was also positively related to higher grades, as was the existence of good self-regulation skills. The results for the UMKC cohort were more promising. One variable (social integration

with students) was positively related to persistence in both the Spring 2000 and Fall 2000 semesters. In addition, perceiving courses as supportive of intrinsic motivation was positively associated with persistence in the Spring 2000 term. On the other hand, the existence of stress for adult learners at UMKC was negatively related with persistence in Spring 2000, while the use of technology and media was negatively related to persistence in Fall 2000. Finally, six of the ten motivational variables were associated with higher grades (five of the six were positively related), which suggests that these factors may mediate persistence and success via course grades for adult learners in a traditional program.

Regression on within-year persistence (Spring 2000)

In an effort to better understand the interaction of these variables, we used logistic regression analysis to examine persistence (see Table 6 in the appendix). We measured persistence as a dichotomous variable that indicated enrollment in Spring 2000, because enrollment in the Spring term was strongly related to enrollment in Fall 2000. The model for Regis indicated three significant factors in predicting persistence: 1) having more transfer credit; 2) having higher grades; 3) receiving financial aid. This model accurately predicted persistence for 78 percent of the cases. A slightly different set of significant variables emerged for UMKC. Similar to the results for the 1993 cohort, women are over 1.5 times less likely to persist in Spring 2000. Adult learners with higher grades were twice as likely to persist, and students who received financial aid were over four times more likely to persist in Spring 2000. Finally, adult students at UMKC who felt well integrated with other students were also more likely to persist in Spring 2000. This model correctly predicted 86 percent of the cases.



Conclusions

The results of our historical and current analyses of adult learners in both accelerated and traditional programs provide direction for future research.

Can adult students be differentiated in terms of their likelihood to persist and succeed in college?

For both cohorts at Regis and at UMKC (Fall 1993 and Fall 1999), having more transfer credits was an important factor in persistence and graduation. For the Fall 1993 cohorts, having more transfer credits increased the probability that the adult student would graduate. For the Fall 1999 cohorts, having more transfer credit increased the probability that the adult student in an accelerated program would be enrolled in Spring 2000. Thus, prior experience — as reflected in the accumulation of prior academic credit — increases the probability of persistence for adult learners.

At both universities, students in the 1993 cohorts with higher grade point averages were less likely to drop out in the first term and more likely to graduate. However, in Fall 2000, higher grades were associated with retention at Regis, but not at UMKC. The influence of grades on retention is consistent with conventional wisdom and prior research based on traditional-age students (Astin, 1993) and suggests that demonstrated success at

the postsecondary level and good grades are associated with the persistence and success of adults as well.

How do personal motivation, perceived motivational conditions, stress and internal community support relate to adult students' persistence and success?

The preliminary results on motivational/stress factors for the current analysis provide some insights, but they are far from conclusive. The broadest point is that student motivational variables are more often associated with persistence and success for students at UMKC than for students at Regis. Because accelerated courses are short (five weeks), highly structured, and have distinctly sequenced and related requirements, the effects attributable to these variables may not have time to more distinctly develop and be characterized as influential by the student. That is, motivational variables may emerge through complex student-student, student-faculty and student-institution relationships that require several months to develop and be effective.

At UMKC, where the motivational variables were more prominent, we find several similarities with traditional-age students. First, students who were better integrated socially were more likely to

persist for a year. This finding confirms previous research about the importance of the relationship between social involvement and student persistence in college (New England Adult Research Network, 1999; Tinto, 1998). Also, perceiving

The analysis showed that tuition aid is significantly related to persistence and grades at both universities.

courses as supportive of intrinsic motivation was significantly associated with a higher grade point average, a finding consistent with adult motivation theory (Wlodkowski, 1999). In addition, having more effective self-regulation skills and a higher degree of self-efficacy is associated with a higher grade point average at UMKC, which supports previously documented research among traditional-age students (Pintrich, Smith, Garcia and

McKeachie, 1993). Since self-efficacy is a concept only marginally applied to understanding achievement among adult college students (Trawick and Corno, 1995), this finding sheds new light on possible interventions and may enhance their chance for success.

Is there a profile for adult students who persist and succeed in accelerated programs that differs from the profile of those who persist and succeed in traditional programs?

Table 8 in the appendix provides the data to compare profiles of the students in the accelerated programs who are likely to persist and succeed with the profiles of the students in the traditional programs who are likely to persist and succeed. In accelerated programs, persistence is associated with a higher amount of transfer credits, having financial aid, a higher grade point average and connecting with faculty. At UMKC, the factors related to persistence were being a member of an

ethnic minority, having financial aid, being well integrated socially with other students, and perceiving courses to be supportive of intrinsic motivation.

Being white, being married, not receiving financial aid, being older, having strong self-regulation skills, and feeling connected to faculty were all associated with better grades at Regis. At UMKC, being married, being older, and having a higher degree of self-efficacy, good self-regulation skills, personal motivation, and perceiving courses to be supportive of intrinsic motivation were all associated with higher grades. While more research is needed to understand the intricacies of these relationships, the factors of background/capacity and experience appear to influence grades, which have an effect on persistence and degree completion.

How does tuition aid relate to adult student persistence and success?

Although this finding was not directly related to the original research questions, the analysis showed that tuition aid is significantly related to persistence and grades at both universities. It may be that financial aid creates an incentive — or a fear of potential loss — that influences adults to persist during the first term. Again, these findings reflect Astin's prior research (1993) conducted with traditional-age students: Need-based aid has direct positive effects on persistence and degree completion.

On the other hand, not receiving financial aid was associated with better grades at both Regis and UMKC. This association may be related to the earlier academic background and learning opportunities associated with students who receive need-based aid.

In general, these initial findings support the continuance and further development of tuition aid for adults. Easing the financial burden appears to increase the probability of continued enrollment for adults.

Issues for further research

We are fortunate that this is a continuing study because that allows us to plan for and address some of the issues for further research. We need more qualitative data to help us understand why students do not persist and to help us understand the interaction of the independent variables as they relate to the dependent variables.

We can continue to use the Adult Learning Survey to assess the students who initially completed the survey in Fall 1999 and are continuing to go to college. This investigation will help us understand how their motivation progresses as they proceed through college and how possible motivational changes relate to demographic, educational background and stress variables as they affect persistence and success.

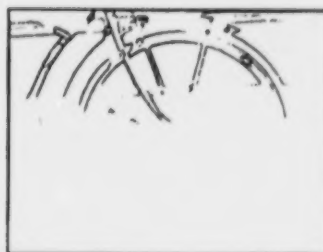
We can conduct exit interviews with students who have left. This investigation will give us a qualitative and more nuanced understanding of their perceptions of those factors most closely related to their persistence and success in the two learning formats.

We also need to create a study to compare more directly the motivation and the stress/responsibility variables between working adult students and traditional-age students. One of the more obvious findings of this study thus far has been that the variables shown to be influential in the success and persistence of traditional-age students are also influential in the success and persistence of adult students. These two populations may have more in common than conventional wisdom currently suggests. Indeed, an important direction for educational policy research is to understand the degree to which traditional-age students are successful and persist in accelerated college formats.

Finally, we need to extend studies of this nature to a wider sample of colleges and regions so that we may identify and build the structures within colleges that increase adults' access and their chances for degree completion. Widening the study will help us better define the paths that

adults follow to persist and succeed in college. And that definition can help us create systems and programs that do more to foster college success.

Perhaps a logical first step in widening this study is for other institutions to take a more systematic approach in assessing their adult-student populations. The Adult Learning Survey (ALS), which was used to collect data for this study, holds promise as a useful tool in this effort. A copy of the ALS is included in the appendix. Researchers and campus officials are encouraged to examine it and, with permission from Lumina Foundation, use it in their student-assessment efforts. Although this survey instrument has not been formally evaluated, it does show promise. (Eight of the 10 scales that measure the motivational variables used in this study had alpha reliability coefficients between .568 and .876 for each cohort). Validation studies are now being conducted in an effort to refine the ALS and prepare it for widespread use as an instrument that will help colleges better serve adult learners.

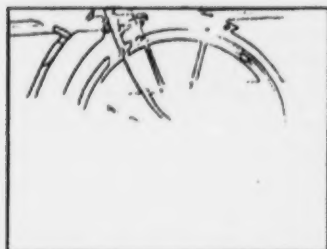


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Appendix

The Adult Learning Survey

The Adult Learning Survey (ALS) is adapted from three other surveys: 1) End of Course Survey (Wlodkowski, 1996), The Motivated Strategies for Learning Questionnaire (Pintrich and others, 1991), and the College Student Experience Questionnaire (Pace and Kuh, 1998).

The ALS (which is offered on the following pages) assesses these variables:

1. **Demographic characteristics:** Information about age, gender, ethnicity/race, family income and parental education.
2. **Self-regulation skills, motivation and perceived motivation:** Self-regulation skills include metacognitive and effort self-regulation; Motivation includes extrinsic goal orientation, self-efficacy, intrinsic goal orientation and effort avoidance; Perceived motivation includes inclusion, attitude, meaning and competence.
3. **Perceived stress and outside responsibilities:** Information about the extent to which students are burdened by outside, non-school responsibilities such as work and family, and the extent to which they perceive themselves to be distressed by these responsibilities.
4. **Internal community support:** Information about the extent to which respondents perceive themselves to be connected to and involved with other students and faculty within their selected programs and the institution.

Note: The psychometric properties of the ALS have not been fully evaluated. Work to establish the validity and reliability of the instrument is now under way. Researchers interested in using part or all of the ALS should first obtain permission from Lumina Foundation.

The Adult Learning Survey

Authors: R.J. Wlodkowski, J.E. Mauldin and S.W. Gahn

MARKING INSTRUCTIONS

- Make solid marks that fill the response completely.
- Erase cleanly any marks you wish to change.
- Make no stray marks on form.

CORRECT: ● INCORRECT: ⊗ ⊖ ⊕ ⊙

Thank you for completing this survey. Your responses will contribute to the understanding and improvement of adult education.

Your individual responses will not be disclosed and will be used only for aggregated statistical purposes. Your completed questionnaire entitles you to a \$10.00 University Bookstore gift certificate.

1. What is your marital status? (choose one)

- ☐ Single ☐ Married
☐ Previously married (separated, divorced or widowed)

2. Will you have children in your care while attending school?

- ☐ Yes, we are a two-parent family ☐ No
☐ Yes, I am a single parent

3. Do you have a documented disability for which you have received accommodation?

- ☐ Yes ☐ No

4. Do you receive any of the following? (mark all that apply)

- ☐ Financial aid ☐ Employer reimbursement
☐ VA benefits ☐ Scholarship

5. What is the highest level of formal education obtained by your parents? (mark one in each column)

Mother	Father	
☐	☐	Grammar school or less
☐	☐	Some high school
☐	☐	High school graduate
☐	☐	Some college
☐	☐	College degree
☐	☐	Some graduate school
☐	☐	Graduate degree

6. During the time that school is in session, about how many hours per week do you work for pay?

- ☐ None, I do not have a job ☐ 21-30 hours per week
☐ 1-10 hours per week ☐ 31-40 hours per week
☐ 11-20 hours per week ☐ Over 40 hours per week

7. What is your annual household income?

- ☐ Less than \$15,000 ☐ \$61,000-\$75,999
☐ \$15,000-\$25,999 ☐ \$76,000-\$99,999
☐ \$26,000-\$40,999 ☐ \$100,000 or more
☐ \$41,000-\$60,999

8. Which of the following best describes your reason for attending this university? (mark one option or write your reason in your own words)

- ☐ Completing a degree ☐ Other _____
☐ Increasing knowledge or skills but not seeking a degree

9. What concerns you most about earning your undergraduate degree? (mark one option or write your reason in your own words)

- ☐ I do not have a major concern
☐ The amount and/or level of work required
☐ My family/work responsibilities
☐ How to pay for my education
☐ Other _____

10. During the time school is in session, about how many hours a week do you usually spend outside of class on activities related to your academic program, such as studying, writing, reading, lab work, rehearsing, etc.?

- ☐ 5 or fewer hours a week ☐ 21-25 hours a week
☐ 6-10 hours a week ☐ 26-30 hours a week
☐ 11-15 hours a week ☐ More than 30 hrs. a week
☐ 16-20 hours a week

11. If you could start over again, would you go to the same institution you are now attending?

- ☐ Definitely yes ☐ Probably no
☐ Probably yes ☐ Definitely no
☐ Uncertain

Please continue on next page

12. A number of statements which students have used to describe their academic experience are given below. Read each statement and fill in the circle to the right that best describes your activities and feelings. If the statement is very true of you, mark 7; if a statement is not at all true of you, mark 1. If the statement is more or less true of you, find the number between 1 and 7 that best describes you.

	Not at all true of me			Very true of me			
	1		4			7	
When I study, I go through the readings and my class notes and try to find the most important ideas.	☐	☐	☐	☐	☐	☐	☐
I find it hard to stick to a study schedule.	☐	☐	☐	☐	☐	☐	☐
Considering the difficulty of the courses, the teachers, and my skills, I think I do well in my classes.	☐	☐	☐	☐	☐	☐	☐
I do class assignments because I want to learn new things.	☐	☐	☐	☐	☐	☐	☐
I use the library as a quiet place to read or study materials I brought with me.	☐	☐	☐	☐	☐	☐	☐
When I make mistakes in my course work, I try to figure out why.	☐	☐	☐	☐	☐	☐	☐
Trying to do well in school and trying to meet my responsibilities outside of school is stressful.	☐	☐	☐	☐	☐	☐	☐
During class time, I often miss important points because I am thinking of other things.	☐	☐	☐	☐	☐	☐	☐
At this university, I enjoy my contact with faculty.	☐	☐	☐	☐	☐	☐	☐
My experience here makes me feel like a valued member of the university.	☐	☐	☐	☐	☐	☐	☐
When I become confused about something I am reading for class, I go back and try to figure it out.	☐	☐	☐	☐	☐	☐	☐
Even when the work is hard, I can learn it.	☐	☐	☐	☐	☐	☐	☐
I ask the instructor to clarify concepts I do not understand well.	☐	☐	☐	☐	☐	☐	☐
I work hard to do well in class even if I do not like what we are doing.	☐	☐	☐	☐	☐	☐	☐
It is fascinating to me to learn new information.	☐	☐	☐	☐	☐	☐	☐
I rarely find time to review my notes or readings before class.	☐	☐	☐	☐	☐	☐	☐
I search the World Wide Web or Internet for information related to my course work.	☐	☐	☐	☐	☐	☐	☐
I work on class assignments, projects, or presentations with other students.	☐	☐	☐	☐	☐	☐	☐
I talk with my instructors about information related to courses I am taking (grades makeup work, assignments, etc.)	☐	☐	☐	☐	☐	☐	☐
Family responsibilities outside of school interfere with accomplishing my learning goals at school.	☐	☐	☐	☐	☐	☐	☐
I often find that I have been reading for class but do not know what it was all about.	☐	☐	☐	☐	☐	☐	☐
The main reason I do my work in this class is because I want to get a high grade.	☐	☐	☐	☐	☐	☐	☐
I want to do well in my classes so the instructor will think I am intelligent.	☐	☐	☐	☐	☐	☐	☐
I enjoy increasing my understanding of the subject matter.	☐	☐	☐	☐	☐	☐	☐

Please continue on next page

12. Continued from previous page.

	Not at all true of me				Very true of me			
	1	2	3	4	5	6	7	
I am very interested in the content area of my courses.	☐	☐	☐	☐	☐	☐	☐	
I feel that this university makes efforts to accommodate adult students.	☐	☐	☐	☐	☐	☐	☐	
I use a computer to prepare reports or papers.	☐	☐	☐	☐	☐	☐	☐	
I have acquired knowledge and skills applicable to a specific job or type of work (vocational preparation) I regard as important.	☐	☐	☐	☐	☐	☐	☐	
I try to figure out how academic work fits with what I have learned from my work experience.	☐	☐	☐	☐	☐	☐	☐	
I am certain I can understand the most difficult material presented in the readings for my courses.	☐	☐	☐	☐	☐	☐	☐	
I prefer course material that arouses my curiosity, even if it is difficult to learn.	☐	☐	☐	☐	☐	☐	☐	
I sometimes feel alone and isolated at this university.	☐	☐	☐	☐	☐	☐	☐	
Understanding the subject matter of my courses is very important to me.	☐	☐	☐	☐	☐	☐	☐	
I go back over assignments I do not understand.	☐	☐	☐	☐	☐	☐	☐	
When course work is difficult, I give up or only study the easy parts.	☐	☐	☐	☐	☐	☐	☐	
I am confident I can understand the basic concepts taught in my courses.	☐	☐	☐	☐	☐	☐	☐	
This semester I have socialized with a faculty member outside of class (had a snack or soft drink with, etc.).	☐	☐	☐	☐	☐	☐	☐	
My experience-based comments are accepted by my professors.	☐	☐	☐	☐	☐	☐	☐	
I only study things for which I think I will be held accountable by the instructor.	☐	☐	☐	☐	☐	☐	☐	
I find the course/s I am taking to be challenging.	☐	☐	☐	☐	☐	☐	☐	
At this university, I am likely to engage other students in conversations and discussions.	☐	☐	☐	☐	☐	☐	☐	
I work with other students to learn in the course/s I take.	☐	☐	☐	☐	☐	☐	☐	
The classroom atmosphere encourages me to participate in class discussions and activities.	☐	☐	☐	☐	☐	☐	☐	
I want to do well in my classes because it is important to show my ability to my family or friends.	☐	☐	☐	☐	☐	☐	☐	
I am confident I can understand the most complex material presented by the instructors in my courses.	☐	☐	☐	☐	☐	☐	☐	
I prefer course material that really challenges me so I can learn new things.	☐	☐	☐	☐	☐	☐	☐	
Work responsibilities outside of school interfere with accomplishing my learning goals at school.	☐	☐	☐	☐	☐	☐	☐	

Please continue on next page

12. Continued from previous page.

	Not at all true of me				Very true of me		
	1		4		7		
I know I am becoming more effective at things I regard as important as a result of the course/s I am taking.	☐	☐	☐	☐	☐	☐	☐
This semester I have become acquainted with students whose interests were different than mine.	☐	☐	☐	☐	☐	☐	☐
I feel that the faculty at this university are sensitive to my other responsibilities.	☐	☐	☐	☐	☐	☐	☐
I find the material in the course/s I am taking to be relevant.	☐	☐	☐	☐	☐	☐	☐
The courses I am taking challenge me to think.	☐	☐	☐	☐	☐	☐	☐
At this university, I enjoy my contact with other students.	☐	☐	☐	☐	☐	☐	☐
In the course/s I take, the atmosphere is friendly and respectful.	☐	☐	☐	☐	☐	☐	☐
I do class assignments because I want to improve my skills.	☐	☐	☐	☐	☐	☐	☐
At this university, I am likely to engage faculty in conversations and discussions.	☐	☐	☐	☐	☐	☐	☐

13. How well do you like college?

- ☐ I am enthusiastic about it ☐ I am more or less neutral about it
☐ I like it ☐ I do not like it

14. Colleges and universities differ from one another in the extent to which they emphasize or focus on various aspects of students' development. Thinking of your experience at this institution, to what extent do you feel that personal relevance and practical value have been emphasized in your courses? Fill in the circle with the number that best represents your impression on each scale.

Emphasis on the personal relevance (applying what you are learning to your interests, concerns, and perspectives) in your courses.

Weak Emphasis ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strong Emphasis
 1 2 3 4 5 6 7

Emphasis on the practical value (applying what you are learning to the real world) of your courses.

Weak Emphasis ☐ ☐ ☐ ☐ ☐ ☐ ☐ Strong Emphasis
 1 2 3 4 5 6 7

15. The next ratings refer to relations with people at this university. Again, thinking of your own experience, please rate the quality of these relationships on each of the following seven-point scales.

Relationships with other students.

Competitive, Uninvolved, Sense of alienation ☐ ☐ ☐ ☐ ☐ ☐ ☐ Friendly, Supportive, Sense of Belonging
 1 2 3 4 5 6 7

Relationships with faculty members.

Remote, Discouraging, Unsympathetic ☐ ☐ ☐ ☐ ☐ ☐ ☐ Friendly, Approachable, Helpful, Understanding, Encouraging
 1 2 3 4 5 6 7

Thank you for taking the time to complete this questionnaire.

Table 1
Comparison of Regis and UMKC study population: Fall 1993

Variable	Fall 1993 enrollment			
	Regis		UMKC	
Degree-seeking students	459	100.0%	370	100.0%
Female	278	60.6%	197	53.2%
Ethnicity				
African-American	20	4.4%	30	8.1%
American Indian	4	0.9	0	0.0
Asian	3	0.7	11	3.0
Hispanic	38	8.3	15	4.1
International	0	0.0	15	4.1
White	322	70.2	262	70.8
Unknown	72	15.7	37	10.0
Total	459	100.0%	370	100.0%
Age				
25-34	191	41.6%	264	71.4%
35-49	243	52.9	95	25.7
50+	25	5.4	11	3.0
Total	459	100.0%	370	100.0%
Type of prior institution				
Two-year only	72	15.7%	94	25.4%
Four-year only	123	26.8	91	24.6
Both two- and four-year	252	54.9	136	36.8
None	12	2.6	49	13.2
Total	459	100.0%	370	100.0%
Number of prior institutions				
None	1	0.2%	49	13.2%
One	82	17.9	100	27.0
Two	133	29.0	98	26.5
Three	113	24.6	73	19.7
Four	68	14.8	30	8.1
Five	40	8.7	15	4.1
Six	14	3.1	3	0.8
Seven or more	8	1.7	2	0.5
Total	459	100.0%	370	100.0%
Transfer credit				
None	19	4.1%	135	36.5
1-30 hours	96	20.9	25	6.8
31-99 hours	314	68.4	149	40.3
100 or more hours	30	6.5	61	16.5
Total	459	100.0%	370	100.0%

Table 2
Patterns of correlation between independent and dependent variables
Fall 1993 cohort

Dependent variable: First-term dropout

Independent variables	Regis	UMKC
Older	More likely	Less likely
Higher GPA	Less likely	Less likely
Two-year only		Less likely
More institutions		Less likely
No prior institutions		More likely
More transfer credits		Less likely

Dependent variable: Degree completion

Independent variables	Regis	UMKC
Female	More likely	
Higher GPA	More likely	More likely
Two-year only	Less likely	More likely
Vocational school	Less likely	
Two- and four-year		More likely
No prior experience		Less likely
More institutions	More likely	More likely
More transfer credits	More likely	More likely

Dependent variable: Grade point average

Independent variables	Regis	UMKC
Minority	Lower	Lower
Older	Higher	
Female		Higher
Vocational school	Lower	
Two-year only	Lower	
Four-year only		Higher
More institutions	Higher	
More transfer credits	Higher	

Correlations are significant to at least the .05 level.

Table 3
Comparison of study population: Fall 1999 and Fall 2000

Page 1

Variable	Fall 1999 entering cohort				Fall 1999 cohort enrolled Fall 2000			
	Regis		UMKC		Regis		UMKC	
Degree-seeking students	321	100.0%	253	100.0%	182	100.0%	148	100.0%
Female	204	63.6%	156	61.7%	114	62.6%	92	62.2%
Married	190	59.2%	126	49.8%	110	60.4%	76	51.4%
Children in home	153	47.7%	105	41.5%	82	45.1%	68	45.9%
Single parent	36	11.2%	31	12.3%	19	10.4%	20	13.5%
Employment status								
Not employed	10	3.1%	52	* 20.6%	8	4.4%	38	25.7%
Work 1-30 hrs/wk	21	6.6	59	23.3	13	7.1	41	27.7
Work 31+ hrs/wk	287	90.3	142	** 56.1	161	88.5	69	46.6
Total	318	100.0%	253	100.0%	182	100.0%	148	100.0%
Ethnicity								
African-American	10	3.1%	23	9.1%	5	2.7%	16	10.8%
American Indian	1	0.3	3	1.2	0	0.0	2	1.4
Asian	10	3.1	13	5.1	7	3.8	10	6.8
Hispanic	25	7.8	11	4.3	14	7.7	7	4.7
International	0	0.0	12	4.7	0	0.0	8	5.4
White	212	66.0	166	65.6	123	67.6	95	64.2
Unknown	63	19.6	25	9.9	33	18.1	10	6.8
Total	321	100.0%	253	100.0%	182	100.0%	148	100.0%
Age								
25-34	184	57.3%	141	* 55.7%	109	59.9%	92	62.2%
35-49	114	35.5	97	38.3	65	35.7	50	33.8
50+	21	6.5	15	* 5.9	8	4.4	6	4.2
Total	319	99.4%	253	100.0%	182	100.0%	148	100.0%
Mother's education								
Grammar school or less	19	6.1%	17	6.9%	10	5.5%	11	7.6%
Some high school	27	8.7	22	8.9	17	9.4	15	10.4
High school graduate	118	38.1	88	35.8	64	35.4	48	33.3
Some college	75	24.2	55	22.4	44	24.3	29	20.1
College graduate	47	15.2	39	15.9	32	17.7	26	18.1
Some grad school	6	1.9	4	1.6	3	1.7	1	0.7
Graduate degree	18	5.8%	21	8.5	11	6.1	14	9.7%
Total	310	100.0%	246	100.0%	181	100.0%	144	100.0%

* Significance of Chi Square for difference between Fall 1999 and Fall 2000 $\leq .05$

** Significance of Chi Square for difference between Fall 1999 and Fall 2000 $\leq .005$

Table 3 continued on page 36

Table 3
Comparison of study population: Fall 1999 and Fall 2000

Page 2

Variable	Fall 1999 entering cohort				Fall 1999 cohort enrolled Fall 2000			
	Regis		UMKC		Regis		UMKC	
Father's education								
Grammar school or less	18	5.8%	22	8.8%	8	4.5%	16	10.9%
Some high school	32	10.3	28	11.2	18	10.1	16	10.9
High school graduate	92	29.7	72	28.9	56	31.3	39	26.5
Some college	67	21.6	51	20.5	32	17.9	27	18.4
College graduate	62	20.0	49	19.7	38	21.2	33	22.4
Some grad school	13	4.2	5	2.0	8	4.5	3	2.0
Graduate degree	26	8.4	22	8.8	19	10.6	13	8.8%
Total	310	100.0%	249	100.0%	179	100.0%	147	100.0%
Transfer credit								
None	77	** 24.1%	85	** 33.6%	21	11.5%	33	22.3%
1-30 hours	79	24.8	15	5.9	44	24.2	7	4.7
31-99 hours	159	** 49.8	106	* 41.9	114	62.6	70	47.3
100 or more hours	4	1.3	47	** 18.6	3	1.6	38	25.7
Total	319	100.0%	253	100.0%	182	100.0%	148	100.0%
Financial aid	94	* 29.3%	120	** 47.4%	62	34.1%	84	56.8%
VA benefits	15	4.7%	18	7.1%	13	7.1%	12	8.1%
Scholarship	7	2.2%	42	16.6%	2	1.1%	27	18.2%
Employer reimbursement	156	48.6%	67	** 26.5%	86	47.3%	30	20.3%

* Significance of Chi Square for difference between Fall 1999 and Fall 2000 $\leq .05$

** Significance of Chi Square for difference between Fall 1999 and Fall 2000 $\leq .005$

Table 4
Comparison of study population: Fall 1993 and Fall 1999

Variable	Fall 1993 entering cohort				Fall 1999 entering who responded to questionnaire			
	Regis		UMKC		Regis		UMKC	
Degree-seeking students	459	100.0%	370	100.0%	321	100.0%	253	100.0%
Female	278	60.6%	197	* 53.2%	204	63.6%	156	61.7%
Ethnicity								
African-American	20	4.4%	30	8.1%	10	3.1%	23	9.1%
American Indian	4	0.9	0	0.0	1	0.3	3	1.2
Asian	3	** 0.7	11	3.0	10	3.1	13	5.1
Hispanic	38	8.3	15	4.1	25	7.8	11	4.3
International	0	0.0	15	4.1	0	0.0	12	4.7
White	322	** 70.2	262	* 70.8	212	66.0	166	65.6
Unknown	72	15.7	37	10.0	63	19.6	25	9.9
Total	459	100.0%	370	100.0%	321	100.0%	253	100.0%
Age								
25-34	191	** 41.6%	264	** 71.4%	184	57.7%	141	55.7%
35-49	243	** 52.9	95	** 25.7	114	35.7	97	38.3
50+	25	5.4	11	3.0	21	6.6	15	5.9
Total	459	100.0%	370	100.0%	319	99.4%	253	100.0%
Number of prior institutions								
None	1	** 0.2%	49	** 13.2%	28	8.7%	85	33.6%
One	82	** 17.9	100	** 27.0	109	34.0	50	19.8
Two	133	29.0	98	26.5	88	27.4	65	25.7
Three	113	** 24.6	73	* 19.7	41	12.8	34	13.4
Four	68	14.8	30	8.1	38	11.8	12	4.7
Five	40	8.7	15	4.1	11	3.4	4	1.6
Six	14	3.1	3	0.8	6	1.9	3	1.2
Seven or more	8	1.7	2	0.5	0	0.0	0	0.0
Total	459	100.0%	370	100.0%	321	100.0%	253	100.0%
Transfer credit								
None	19	** 4.1%	135	36.5%	77	24.1%	85	33.6%
1-30 hours	96	20.9	25	6.8	79	24.8	15	5.9
31-99 hours	314	** 68.4	149	40.3	159	49.8	106	41.9
100 or more hours	30	** 6.5	61	16.5	4	1.3	47	18.6
Total	459	100.0%	370	100.0%	319	99.4%	253	100.0%

* Significance of Chi Square for difference between Fall 1993 and Fall 1999 $\leq .05$

** Significance of Chi Square for difference between Fall 1993 and Fall 1999 $\leq .005$

Table 5
Models of degree completion and first-term dropout
Fall 1993 cohort

Variable	Regis				UMKC			
	Degree completion		First-term dropout		Degree completion		First-term dropout	
	B	(S.E.) Sig. Exp (B)	B	(S.E.) Sig. Exp (B)	B	(S.E.) Sig. Exp (B)	B	(S.E.) Sig. Exp (B)
Female	0.838	0.250 ***	2.312	0.103	0.295	0.137	0.241	0.707 0.298 * 2.028
Age				0.054	0.019 **	1.055		
GPA	0.788	0.305 **	2.200	-0.659	0.162 ***	0.518	0.467 0.157 ** 1.596	-0.735 0.148 *** 0.480
Amount of transfer credit	0.029	0.005 ***	1.029	-0.002	0.006	0.010 0.003 *** 1.010	-0.007 0.003 * 0.993	
Number of prior institutions	0.365	0.092 ***	1.440	-0.030	0.115	0.091 0.109	-0.254 0.146	
No prior institution						-0.416 0.550	0.960 0.495 * 2.612	
Type of prior institution								
Two-year only	-7.691	12.429		0.174	0.433	0.621 0.285 * 1.862	-0.909 0.408 * 0.403	
Vocational school	-6.909	18.924		0.196	0.647			
Constant	-6.396	1.200 **		-1.566	0.890	-3.095 0.629 ***	1.314 0.587 *	
Observations	459		459		370		370	
% Cases predicted correctly	78.20%		87.40%		67.30%		82.40%	

*** Significant at the .001 level.

** Significant at the .01 level.

* Significant at the .05 level.

Table 6
Models of persistence
Fall 1999 cohort

Variable	Regis				UMKC			
	B	(S.E.)	Sig.	Exp (B)	B	(S.E.)	Sig.	Exp (B)
Married	0.289	0.367			0.412	0.564		
Single parent	-0.972	0.532			-0.137	0.736		
Female	-0.296	0.332			-1.171	0.527 *		0.310
Age	-0.033	0.018			0.075	0.041		
Employed full time	-0.572	0.338						
Household income > \$60,000					-1.204	0.637		
GPA	0.662	0.273 **		1.938	0.672	0.339 *		1.958
Amount of transfer credit	0.016	0.006 **		1.016				
Received financial aid	1.062	0.412 **		2.892	1.437	0.554 **		4.209
Motivational indicators								
Attitude and meaning					0.009	0.022		
Social integration – students					0.079	0.038 *		1.082
Faculty interaction	0.028	0.032						
Stress					-0.042	0.055		
Constant	-0.874	1.245			-4.815	2.286 *		
Observations	288				193			
% Cases predicted correctly	78.10%				86.00%			

*** Significant at the .001 level.

** Significant at the .01 level.

* Significant at the .05 level.

Table 7
Models of grade point average
Fall 1993 cohort

Variable	Regis			UMKC		
	Standardized coefficient	t	Sig.	Standardized coefficient	t	Sig.
Non-white	-0.103	-2.071	*	-0.186	-3.502	***
Female	0.062	1.248		0.224	4.169	***
Age	0.085	1.69		0.047	0.871	
Amount of transfer credit	0.200	3.406	***	-0.062	-1.065	
Number of prior institutions	-0.003	-0.056		-0.018	-0.305	
Type of prior institution						
Two-year only	-0.037	-0.68		-0.083	-1.497	
Vocational	-0.016	-0.28				
Constant	2.902	14.693	***	2.744	11.056	***
Adjusted R ²	0.061			0.083		
F	4.583		***	5.981		***
N	386			332		

*** Significant at the .001 level.

** Significant at the .01 level.

* Significant at the .05 level.

Table 8
Correlation matrix of persistence and success
Fall 1999 cohort

Variable	Regis			UMKC		
	Spring 2000	Fall 2000	Grades	Spring 2000	Fall 2000	Grades
Married	.053	.017	.121*	-.020	.052	.210**
Single parent	-.101	-.024	-.125*	.026	.042	-.053
Children	-.025	-.064	.044	.059	.094	.139
Non-white	-.112	-.016	-.264**	.160*	.096	-.187*
Female	-.002	-.024	.036	-.097	-.024	.050
Age	-.095	-.080	.162**	.031	-.051	.176*
Employed full time	-.115*	-.113*	.003	-.131	-.184**	0.018
Amount of transfer credit	.230**	.348**	.128*	.041	.127	-.134
Received financial aid	.134*	.116*	-.165**	.210**	.102	-.152*
Received VA benefits	.071	.101	.061	-.065	.053	-.140
Received employer reimbursement	-.028	-.045	.099	-.136	-.142*	-.004
Household income > \$60,000	-.002	-.137*	.005	-.250**	-.163*	.139
GPA	.152**	.118*		.155*	.090	
Father had BA or better	.045	.116*	.044	-.056	.094	.063
Mother had BA or better	.021	.086	.012	.059	.117	-.054
Motivational variables						
Self-regulation	.044	-.023	.115*	.095	.128	.306**
Extrinsic goal orientation	-.068	-.063	.009	.002	.053	-.075
Self-efficacy	.075	.033	.033	.106	.128	.418**
Intrinsic goal orientation	.053	-.028	.097	.116	.104	.277**
Attitude and meaning	.084	-.057	.102	.167*	.049	.241**
Use technology and media	-.038	-.056	.055	-.069	-.180*	-.065
Social integration — students	.071	.004	.109	.208**	.235*	.032
Faculty interaction	.117*	.020	.134*	.091	.027	.262**
Stress	-.051	-.037	-.029	-.151*	-.120	-.099
Effort avoidance	-.053	.009	-.070	-.033	-.006	-.178*
Enrolled Spring 2000		.431**	.152**		.520**	.155*

** Significant at the .01 level.

* Significant at the .05 level.

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About the Center for the Study of Accelerated Learning

The Center for the Study of Accelerated Learning, located in the School for Professional Studies at Regis University, is a research institute for the assessment of the quality and applicability of intensive learning formats in higher education. The center conducts primary research on adult learning to evaluate teaching strategies, document outcomes and provide ongoing education to support the effectiveness of accelerated programs. In keeping with the Jesuit tradition of commitment to social justice, the center is primarily concerned with research questions that relate to how well accelerated programs serve people often underrepresented in universities, such as working adults and low-income and immigrant populations.



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